

Exhibit 20

REDACTED VERSION OF **DOCUMENT SOUGHT TO BE SEALED**

I think it's important to factor in 3 things:

[illegible]

a. [REDACTED]

[illegible][illegible]

From: Sheryl Sandberg
Sent: Wednesday, September 6, 2017 9:29 AM
To: David Wehner <dwehner@fb.com>; Alex Schultz <aschultz@fb.com>
Cc: Dan Rose <drose@fb.com>; David Fischer <dfischer@fb.com>; Javier Olivan <jolivan@fb.com>
Subject: RE: FB Video Initiatives, Measurement Issues Good For NLSN, SCOR

We spoke about this a long time ago many times. I thought we knew about this but we also recognized that when the self-reporting data was so different than the census we knew we had to address it. I believe we still do.

From: David Wehner

Sent: September 6, 2017 7:23 AM

To: Alex Schultz <[REDACTED]>

Cc: Dan Rose <[REDACTED]>; David Fischer <[REDACTED]>; Sheryl Sandberg <[REDACTED]>; Javier Olivan <[REDACTED]>

Subject: Re: FB Video Initiatives, Measurement Issues Good For NLSN, SCOR

This was my understanding as well. We have been discussing these discrepancies as long as I have been here and recall other advertisers ([REDACTED - PII] comes to mind) pointing these out.

Dave Wehner
+1 415 271 9818

On Sep 6, 2017, at 6:45 AM, Alex Schultz <[REDACTED]> wrote:

I'll share what I shared with Carolyn, Dan Neary, Rob and Rabkin here from my opinion yesterday so you have it. Totally fair if anyone disagrees with this but I don't think this is a metrics bug. I think it's a deliberate product decision and as such should be handled by the ads team and not metrics review.

"In my opinion this is a deliberate product decision to use self-reported age and not a metrics bug. We discussed this way back when I worked with Rabkin (and Tim Kendall) back in 2007-2008 so I believe it's been a deliberate tradeoff since launch.

I believe this communication that age is self-reported is the correct answer and I actually think it's a really good answer. We could certainly get into age modelling if we felt that was the right thing to do (but that would introduce whole new sources of error – we are only really good at this in the US) or we could retire the tool which I know has been suggested and rejected down the years."

Let me know if there's anything you think we should be doing as a central metrics review or if you think this tool should explicitly be added to the list of public metrics to deprecate.

Alex

From: Dan Rose

Sent: Wednesday, September 6, 2017 12:15 AM

To: David Fischer <[REDACTED]>; Sheryl Sandberg <[REDACTED]>; David Wehner <[REDACTED]>; Javier Olivan <[REDACTED]>; Alex Schultz <[REDACTED]>

Subject: Fwd: FB Video Initiatives, Measurement Issues Good For NLSN, SCOR

FYI

From: Fidji Simo <[REDACTED]>

Sent: Tuesday, September 5, 2017 4:47 PM

Subject: Re: FB Video Initiatives, Measurement Issues Good For NLSN, SCOR

To: Natalia Kanevsky <[REDACTED]>; Dan Rose <[REDACTED]>; Nick Grudin <[REDACTED]>; Fred Leach <[REDACTED]>; Brad Smallwood <[REDACTED]>; Mark Rabkin <[REDACTED]>; Rob Goldman <[REDACTED]>

<[REDACTED]>, Vanessa Chan <[REDACTED]>

+ Rabkin and Goldman on the metric issue highlighted below

From: Natalia Kanevsky <Natalia Kanevsky <[REDACTED]>>
Date: Tuesday, September 5, 2017 at 7:10 PM
To: Fidji Simo <[REDACTED]>, Dan Rose <[REDACTED]>, Nick Grudin <[REDACTED]>, Fred Leach <[REDACTED]>, Brad Smallwood <[REDACTED]>
Cc: [REDACTED], [REDACTED], Vanessa Chan <[REDACTED]>
Subject: FW: FB Video Initiatives, Measurement Issues Good For NLSN, SCOR

Hello from IR team,
Brian Wieser from Pivotal published a note on FB Video and Measurement. The full report is attached.

FOR INTERNAL USE ONLY: *These equity research notes should not be used in any meetings with press, partners, or clients. Please do not forward or post internally.*

Thank you,
Natalia Kanevsky

From: Brian Wieser <Brian Wieser <brian@pvtl.com>
Reply-To: "brian@pvtl.com" <brian@pvtl.com>
Date: Tuesday, September 5, 2017 at 5:56 PM
To: Natalia Kanevsky <[REDACTED]>
Subject: FB: FB Video Initiatives, Measurement Issues Good For NLSN, SCOR

BOTTOM LINE: Facebook is establishing itself as a destination for premium video content, and demonstrating a willingness to pay significant amounts of money for that content. Facebook can likely drive revenue growth to offset content costs, albeit at lower margins than what the company currently generates. However, because of measurement issues the company has faced in the past (and possibly a new one identified by a trade publication in Australia and replicated by us within the United States), we think the primary winner of Facebook's expansion in video will be third party measurement firms, including Nielsen and comScore.

In recent days, items related to Facebook's video initiatives caught our attention. The company has long sought to expand beyond the digital advertising budgets that it and Google dominate. As the medium with the most significant budgets historically, television budgets have served as a natural target. Unfortunately for Facebook, merely reaching a large number of people was always going to be insufficient to accomplish its goals, as TV advertisers generally want reach paired with video ad units while also borrowing the brand equity associated with premium content. Unsurprisingly, this reality has required Facebook to change its approach, which, following some preliminary moves earlier this year, led to the announcement of Watch last month.

Relatedly, Discovery Communications announced last week that it would develop "premium mid-form shows" for Watch. This followed on prior announcements that companies including A&E, Univision and others would do the same. And then, more notably, news emerged this week that Facebook bid USD \$610mm for five years of digital rights associated with IPL cricket within the Indian sub-continent. As it turned out, Fox's Star India won the bidding of a more comprehensive package. While IPL is clearly an important media property, considering that digital advertising and total advertising in India equate to 2% and 5%, respectively, of the equivalent markets in the United States, we can see that a \$600mm agreement with Facebook would have been a significant one by any measure.

Our read-through is that Facebook is likely willing to spend billions of dollars to buy rights for content that might otherwise appear on TV. And unless Facebook embraces subscription models, these efforts will be entirely ad-supported. This likely means the company will generate substantially lower margins for the incremental revenues Facebook generated by related content. Going back to why Facebook pursued TV advertising budgets without content investments in the past, one might argue it

was worth a shot to chase the budgets if the effort provided a chance at incremental revenue growth without margin erosion.

So while we think the company is positioning itself to compete for TV budgets with TV-like content, we think that the large marketers who dominate TV advertising will only do so after applying significant scrutiny to the metrics associated with Facebook campaigns. Measurement issues at Facebook have been top-of-mind for many of those same marketers over the past year given revelations around over-stated average video viewing time, video viewing completions, miscalculations of organic page reach and other data which impacts how budgets are planned. And then last week Australian trade publication *AdNews* discovered that Facebook claims to reach 1.7mm more 16-39 year-olds in Australia than exist in the country according to its census bureau. We attempted to replicate the study for the United States and found a similar outcome.

Specifically, through Facebook's Ads Manager we can see that Facebook claims a potential reach within the US of 41mm 18-24 year-olds, 60mm 25-34 year-olds and 61mm 35-49 year-olds. By contrast, US Census data indicates that last year there are a total of 31mm 18-24 year-olds, 45mm 25-34 year-olds and 61mm 35-49 year-olds. Nielsen estimates for the 2017-18 season are close to the 2016 US Census figures, with 31mm 18-24 year-olds, 43mm 25-34 year-olds and 61mm 35-49 year-olds. Conversations with agency executives on this topic indicate to us that the gap between Facebook and Census figures is not widely known. While Facebook's measurement issues won't necessarily deter advertisers from spending money with Facebook, they will help traditional TV sellers justify existing budget shares and could restrain Facebook's growth in video ad sales on the margins. More significantly, we think that awareness of general measurement issues causes larger advertisers to require the use of third party measurement services, including Nielsen's DAR and comScore's vCE, to provide the basis against which Facebook is paid. As these products generate revenue on a campaign basis (vs. traditional TV measurement, which has fixed fees), growth in Facebook, YouTube and other digital media will continue to provide growth support for third party measurement companies.

Following this analysis, our estimates and valuations are unchanged. We continue to rate Facebook Sell with a \$140 YE2017 price target. We continue to rate Nielsen Hold with a \$38 YE2017 price target.

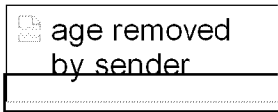
VALUATION. We value FB on a DCF basis, with a 6.0% long-term growth rate, a 8.1% near-term discount rate and a 10.9% long-term discount rate. We value Nielsen with a DCF, using a 6.5% near-term discount rate, a 11.5% long-term discount rate and long-term 4.0% growth.

RISKS. Risks for web publishers relate to: 1) high degree of rivalry given absence of barriers to deter new competition from emerging 2) high and increasing capital needs and 3) government regulations/consumer pushback related to data management. Risks to Nielsen include macro-economic trends, the rising availability of less-expensive research solutions (which could impact Nielsen's discretionary services) and the potential that Nielsen's status as the provider of a TV advertising trading currency could be threatened

FULL REPORT INCLUDING RISKS AND DISCLOSURES CAN BE FOUND HERE: [FB 9-6-17.pdf](#)

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This is a PDF generated by PacerPro. It corresponds to case # 3:18-cv-04978-JD, "*DZ Reserve et al v. Facebook, Inc.*"

Docket #: 228	Attachment: 14	Filed: 2020-09-25
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Administrative Motion to File Under Seal Attachments 1-11 to Plaintiffs' Unopposed Administrative Motion for Leave to File Exhibits 1-11 in Support of Discovery Dispute Letter Regarding Dep. of S. Sandberg filed by DZ Reserve. (Attachments: # (1) Declaration in Support of Motion to Provisionally File Under Seal, # (2) Proposed Order on Motion to Provisionally File Under Seal, # (3) Exhibit 1 - Public, # (4) Exhibit 2 - Public, # (5) Exhibit 3 - Public, # (6) Exhibit 4 - Public, # (7) Exhibit 5 - Public, # (8) Exhibit 6 - Public, # (9) Exhibit 7 - Public, # (10) Exhibit 8 - Public, # (11) Exhibit 9 - Public, # (12) Exhibit 10 - Public, # (13) Exhibit 11 - Public, # (14) Exhibit 1 - Filed Under Seal, # (15) Exhibit 2 - Filed Under Seal, # (16) Exhibit 3 - Filed Under Seal, # (17) Exhibit 4 - Filed Under Seal, # (18) Exhibit 5 - Filed Under Seal, # (19) Exhibit 6 - Filed Under Seal, # (20) Exhibit 7 - Filed Under Seal, # (21) Exhibit 8 - Filed Under Seal, # (22) Exhibit 9 - Filed Under Seal, # (23) Exhibit 10 - Filed Under Seal, # (24) Exhibit 11 - Filed Under Seal)(Graber, Geoffrey) (Filed on 9/25/2020) (Entered: 09/25/2020)

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